NSLS OHSAS Job Risk Assessment

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Name(s) of Risk Team Members: D. Abel, J. Aloi, M. Sullivan	**Point Value → Parameter ↓**	**1**	**2**	**3**	**4**	**5**
Job Title: ***Radioactive and Mixed Waste Generation*** **Job Number or Job Identifier:** **LS-JRA-0027**	**Frequency (B)**	**≤once/year**	**≤once/month**	**≤once/week**	**≤once/shift**	**>once/shift**
Job Description: Generating Radioactive and Mixed Waste	**Severity (C)**	**First Aid Only**	**Medical Treatment**	**Lost Time**	**Partial Disability**	**Death or Permanent Disability**
Training and Procedure List (Optional): PRM & SA Hazardous Waste and Radioactive Waste Generation Approved by: W. R. Casey Date: 10/24/05 Rev. #:**1** **Revision Log**	**Likelihood (D)**	**Extremely Unlikely** <<1x/20yrs	**Unlikely** 1x/10-20yrs	**Possible** >1x/10-20yrs	**Probable** 1x/yr	**Multiple** >1x/yr
Stressors (if applicable, please list all):		**Reason for Revision (if applicable):**			**Comments:**	

		Before Controls							**After Initial Controls**						**After Additional Controls**					
Job Step / Task	**Hazard**	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Initial Controls**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Control(s) Added to Reduce Risk**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**% Risk Reduction**
Storing containers of mixed waste in a SAA and 90-Day Area	**SPILL**: due to container failure may result in explosion or fire from flammable/combustible materials coming in contact with an ignition source or chemical reaction	N	1	4	4	5	80	Segregation of incompatibles, chemical storage cabinets, PPE, work planning/experimental review, ventilation, secondary containment, spill response, use of safer substitutes, Tier 1 inspections, container	1	4	3	2	24							

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Job Step / Task	**Hazard**	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Initial Controls**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Control(s) Added to Reduce Risk**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**% Risk Reduction**
								labeling, area posting, shelf-life monitoring, containers specific for the hazard and operation, training, applicable subject areas, SAA monthly checklist, material substitution												
	SPILL: due to container failure may result in exposure to toxic materials or corrosive splash	N	1	4	4	5	80	chemical storage cabinets, work planning/experimental review, ventilation, secondary containment, use of safer substitutes, Tier 1 inspections, container labeling, area posting, shelf-life monitoring, containers specific for the hazard and operation, training, applicable subject areas, PPE, SAA monthly checklist, material substitution	1	4	3	2	24							
	Reaction: Chemical reaction of hazardous materials stored in a refrigerator during a power failure	N	1	1	4	3	12	Emergency power generator, work planning/experimental review, use of safer substitutes, Tier 1 inspections, container labeling, area posting, shelf-life monitoring, containers specific for the hazard and operation, training, applicable subject areas, PPE, secondary containment, SAA monthly checklist, material substitution	1	1	3	2	6							
	Radiation exposure and contamination from spill							See **LS-JRA-0023**												

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Moving containers of mixed waste from SAA to 90-Day Area	**SPILL**: due to dropping container may result in explosion or fire from flammable/combustible materials coming in contact with an ignition source	N	1	4	4	5	80	work planning/experimental review, spill response, Tier 1 inspections, container labeling, containers specific for the hazard and operation, training, applicable subject areas, secondary containment, material substitution	1	4	3	3	36							
	SPILL: due to dropping container may result in exposure to toxic materials or corrosive splash	N	1	4	4	5	80	work planning/experimental review, PPE, spill response, Tier 1 inspections, container labeling, containers specific for the hazard and operation, training, applicable subject areas, secondary containment, material substitution	1	4	3	3	36							
	Radiation exposure and contamination from spill							See **LS-JRA-0023**												
Adding Mixed Waste to a SAA container	**SPILL**: due to dropping container may result in explosion or fire from flammable/combustible materials coming in contact with an ignition source	N	1	4	4	5	80	spill pads, work planning/experimental review, PPE, use of small volumes, fume hood, secondary containment, spill response, use of safer substitutes, Tier 1 inspections, container labeling, area posting, containers specific for the hazard and operation, applicable subject areas, material substitution	1	4	3	3	36							

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	SPILL: due to dropping container may result in exposure to toxic materials or corrosive splash	N	1	4	4	5	80	spill pads, work planning/experimental review, PPE, use of small volumes, fume hood, secondary containment, spill response, use of safer substitutes, Tier 1 inspections, container labeling, area posting, containers specific for the hazard and operation, applicable subject areas, material substitution	1	4	3	3	36							
	Exposure to toxic materials including inhalation, absorption, ingestion and injection	N	1	4	4	5	80	work planning/experimental review, PPE, use of small volumes, fume hood, use of safer substitutes, container labeling, area posting, applicable subject areas, area and/or personnel monitoring, material substitution	1	4	2	3	24							
	Exothermic reaction from mixing incompatibles	N	1	4	4	5	80	work planning/experimental review, PPE, use of small volumes, use of safer substitutes, container labeling, area posting, reactions vessels specific for the hazard, applicable subject areas, material substitution	1	4	4	3	48							
	Radiation exposure and contamination from spill							See **LS-JRA-0023**												
Radioactive Waste Handling	Radiation exposure and contamination							See **LS-JRA-0023**												

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Material handling - manual	See **LS-JRA-0018**																			
Material handling - mechanical	See **LS-JRA-0019**																			

***Risk:**	**0 to 20 Negligible**	**21 to 40 Acceptable**	**41-60 Moderate**	**61 to 80 Substantial**	**81 or greater Intolerable**